

# KIT CLUB NEWS!

Dataloggers now available

Kit couriers - involve the whole community

Plan ahead

To celebrate 25 years of manufacture & supply of data-logging equipment, local company DCP Microdevelopments recently donated almost £1500 of equipment to the TSN Kit Club. This most generous donation means we are able to offer single 'LogIT' Explorer multipurpose data-loggers to the Habitats, Adaptations, Light, Mini-Sound and Cars & ramps kits, together with a new



stand-alone data-logging kit with built-in probes for light, sound and temperature and external sensors for pH, voltage and pulse-rate for more advanced studies. Downloading data is easy, and DCP have also offered technical phone support.

As the number of kits grow, so does the number of schools using our kits. We are keen that everyone can access the kits and we suggest you mention the Kit Club to governors and others involved with your school to help with kit collection and return. We believe this is the biggest limiting factor on kit club use, but know that our teachers are inventive and resourceful types.

If you have yearly planning lists, contact Carol now to make your bookings for 2007/08. However, please make sure that you remember to stick to your bookings. With over 100 schools signed-up to the Kit Club, your late return or failure to pick-up a kit will affect another school.

Full kit information available at [www.tsn.org.uk](http://www.tsn.org.uk), under Kit Club, or contact [tsn.kits@bbsrc.ac.uk](mailto:tsn.kits@bbsrc.ac.uk) - email is our preferred method of kit booking. Alternatively telephone Carol Hince on 01603 450619, Wednesday - Friday inc.

## Tallest Jelly Competition

The Institute of Food Research, in association with the Norwich & Norfolk Food Festival, is setting schools a challenge to find out who can make the tallest jelly. It is REALLY difficult to make a jelly more than 10cm tall due to the gel strength. Try it and see for yourself or take a look at our failures on the website [www.ifr.ac.uk/jellyvision](http://www.ifr.ac.uk/jellyvision). To make it taller you either need to increase the gel strength (in this competition that's cheating) or give the jelly structure using edible materials such as fruit, sponges or pasta. Let your imagination run wild! Food technology, chemistry and engineering come into their own in this test of ingenuity and skill!

Entries are open to any age group and fantastic prizes will be awarded for all entries who successfully bring their jellies to the Final, and for the eventual winners in Primary (up to Yr 6) and Secondary (up to Yr 11) and 6th form. Prizes will also be awarded for the best project design even if it fails! So remember to bring along your ideas and plans too including design modifications following failures. This can be on a poster, in a project book or as a story board, you choose!

**Competition Rules**

1. The jelly must be made from Hartley's tablet jelly and made up following the directions on the pack.
2. The finished jelly must be free-standing.
3. You must be prepared to bring your jelly to the Final and remove the mould at 11:00 on Wednesday 17 October at the Forum, Millennium Plain, Norwich. Height will be measured 10 minutes after taking the mould off.
4. Everything used in construction **must be edible** and you should be prepared to eat any part of it!
5. No limit to the number of entries per school but teams should be of no more than 5 pupils
6. The judges decision will be final.

Members of all successful team entries will receive free tickets to the Inspire Discovery Centre, Norwich and for the winning team, a performance of the Inspire "Play with Food" Science Show in your school.

Please submit intent of your entry to by Friday 11th October and include the name of your school and contact details. We will send you a supply of jelly by return.

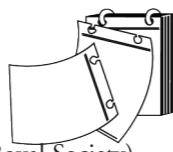
Send us images of your practice jellies, success and failures, for inclusion on our web site! Don't forget to let us know how tall it is and we can start the competition on line.

.....notice how the jelly collapses after the mould is removed.

We gratefully acknowledge the support of Premier Foods and Inspire Discovery Centre.

## Dates for your diary ....

- 3<sup>rd</sup> July - GIS Master Class, rescheduled
- 9 - 15<sup>th</sup> Sept. - BA Festival of Science (YORK)
- 11<sup>th</sup> Oct. - Closing date for Jelly Competition (above)
- tbc October - TSN Annual Meeting
- 25<sup>th</sup> Oct. - closing date for Partnership Grant applications (Royal Society)



## Teacher Scientist Network (TSN)

Telephone +44(0)1603 450304, Fax +44(0)1603 450045,  
Coordinator: Dr. Phil Smith

Email [ts.network@bbsrc.ac.uk](mailto:ts.network@bbsrc.ac.uk),  
Chairman: Prof. Keith Roberts

[www.tsn.org.uk](http://www.tsn.org.uk)

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# TSN News

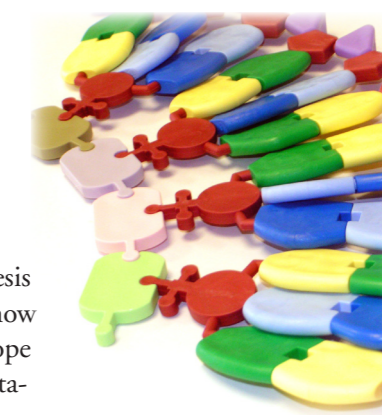
The TSN portfolio continues to grow; as part of a collaborative bid with the University of Edinburgh and others, TSN (on behalf of the John Innes Centre) is coordinating placements of PhD students and post-docs with secondary schools across the East of England. We hope many of these will evolve into longer-term partnerships if these researchers stay in the area. Researchers in Residence is open to both science and non-science researchers and is funded by RCUK and the Wellcome Trust.

TSN is also a satellite centre for the East of England Science Learning Centre, the coordinator of the DfES funded National Kit Club project, played a leading role in the success of the recent BA Festival in Norwich and most importantly continues to provide an exemplar programme of high-quality activities for our members across Norfolk & North Suffolk.



## Secondary School Kits

The popularity of our Kit Club is at an all time high but still we don't see enough secondary schools taking advantage of the resources we offer. We have recently acquired some new materials which we hope will fill some gaps in our coverage and which will really benefit those teaching KS 3/4 science - a number of Molymod Molecular Modelling Kits for organic and inorganic molecules, DNA space-filling models and protein synthesis kits to help teach transcription and translation. We are now also able to offer for loan a high-quality Nikon Microscope providing up to x1000 magnification and brand-new data-logging equipment. Full details at [www.tsn.org.uk](http://www.tsn.org.uk)



## Prof. Keith Roberts, OBE



TSN founder, and recently retired associate director and Professor of Cell Biology at the John Innes Centre, Keith Roberts, has received an OBE for his services to Plant Science in the New Year honours list. This is due recognition for Keith's many scientific achievements but as his tireless activities for TSN demonstrate, he is also someone who has also always recognised the importance of outreach activity alongside lab work. Most recently Keith has agreed to be the regional champion for Researchers in Residence.

## CONTENTS

Partnership Activity	2
tsn North East	2
askbiologist.org.uk	2
money, money, money	3
VI <sup>th</sup> form event: Inside Science	3
Smashing Eggs & Smashing Particles	3
Master Class 13 - new date	3
The Kit Club	4
Competition	4
New Members	4
Diary Dates	4



**Partnership News - Carla Clé (JIC) and Sarah Coppard (Attleborough Junior School)**  
 ... in the words of Beth Casey & Molly Sims (Yr6)



We had a real-life scientist come in and help us in our science lesson. When our teacher told us a scientist was going to be working with us we thought it was going to be an old man with white hair and glasses, but our scientist was a girl!

The scientist talked to us about the human eye, and she helped us to learn about the different parts. To help us she bought a huge (model) eye ball which had a camera in it. We looked inside the model eye and saw that the eye actually sees everything upside down, but the brain changes it to normal.

We learnt a lot in that lesson and it was really fun. We even got a certificate! Our teacher told us that the scientist is linked to our class and will coming for more lessons during the year. We are really lucky to have our own scientist.

**tsn** teacher  
**north east** Scientist  
**Network**

As TSN heads towards its 13<sup>th</sup> birthday, Phil was delighted to accept an invitation to head Northwards to the Science Learning Centre in Durham in February and give the keynote speech at the launch of the Teacher Scientist Network North-East. A vibrant gathering of over 60 teachers and scientists came together at the launch event and hear Phil talk enthusiastically about the lessons we've learnt over the years and provide lots of encouragement for their future.



We had already worked with the NE Science Learning Centre during the National Kit Club project in 2004/05 and were encouraged by their enthusiasm to promote partnership activity. Colleagues from the North-East had visited TSN in Norfolk last summer for advice on establishing a Network. We continue to actively disseminate our best practice around the country.



With so many short-term contracts in science, members may be interested that other partnership schemes are to be found in Bristol, Wales, Glasgow and now the North-East, all based on TSN's successful model.

**askbiologist.org.uk**

Concerned with the accuracy of material on the web and keen to encourage budding scientists, a number of active researchers and science enthusiasts have recently set-up [www.askbiologist.org.uk](http://www.askbiologist.org.uk)

Specifically the group are professional biologists and palaeontologists who have got together to provide this resource. They include university professors, lecturers, professional researchers, doctoral students, museum curators, fossil preparators, science writers and everything in between. They come from, and work around the world - Norway, Argentina, Canada, Ireland, UK, Germany, USA, France, Japan, Australia and many more places. The names of contributors are listed on the website.

What can you ask about?

You can ask pretty much anything about biology and palaeontology. There are people who work on evolution, ecology, spiders, trees, birds, dinosaurs, anatomy, elephants, conservation, viruses, anthropology and many other topics. Some of us work in museums, others in universities or research institutes, and a few are independent workers. They are keen for you to try it out and feedback - why not?!

**Money, money, money**

- We are all searching for ways to fund those science projects that need that little bit of extra input, so we thought these three sources of information might help.



EMBO Science & Society Projects - a chance for life scientists to obtain funding for bioscience initiatives [www.embo.org/scisoc/grants.html](http://www.embo.org/scisoc/grants.html)

Funding Opportunities for Schools - a set of collated links on the webpages of the Science Learning Centres. See Weblinks at [www.sciencelearningcentres.org.uk](http://www.sciencelearningcentres.org.uk)

Partnership Grants (Royal Society) and further info about funding sources [www.royalsoc.ac.uk/page.asp?id=1948](http://www.royalsoc.ac.uk/page.asp?id=1948)

**STOP PRESS!**  
 £40K grant secured by TSN  
 TSN has just heard that its application to the BBSRC Science in Society awards has been successful. We are most grateful to the Institute of Food Research and the John Innes Centre for their support of our application. This award will help sustain core TSN activity in 2007/08.

**Inside Science**

Applications are invited from 6th Form science students to attend a 3 day workshop from Tuesday 18<sup>th</sup> September to be held on the Norwich Research Park at Colney. There are only 20 places available for this unique insight into

science at one the worlds leading centres of excellence in bioscience. The workshop will run from 09:30-17:00 daily. Student travel costs will be reimbursed in full and lunch and refreshments will be provided. On completion of the course each attendee will be provided with a certificate of attendance and much much more!

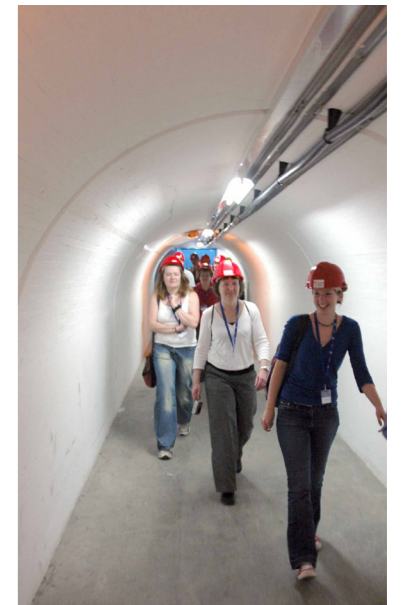
Students will have talks, demonstrations and tours covering a wide range of science topics currently being researched on the Norwich Research Park giving them a flavour of what it is like to study and work in a scientific environment day to day. Please send a letter of application stating why you want to go on this workshop together with a letter of support from one of your current science teachers to [dee.rawsthorne@bbsrc.ac.uk](mailto:dee.rawsthorne@bbsrc.ac.uk) no later than Friday 29<sup>th</sup> June. Please ensure we have full contact details as offers of a place may take place after the school year ends.

**Smashing eggs & smashing particles**

TSN in collaboration with the Science Learning Centre East of England and Science Learning Centre South West arranged over Easter for the largest single delegation of UK secondary school teachers to visit CERN, the European Particle Physics Laboratory, in Geneva, to view the largest experiment in the world.

45 teachers (22 from the East of England; 23 from the South West) visited the Laboratory in advance of the switch-on of the particle smashing Large Hadron Collider (LHC) and its experiments later this year; a truly inspiring opportunity for teachers of particle physics. Any resources developed from the day will be shared with TSN members.

Let us know if you would be interested in the possibility of participating in a future trip to the LHC. ([phil.smith@bbsrc.ac.uk](mailto:phil.smith@bbsrc.ac.uk)). Further information and images of the LHC can be found at [www.lhc.ac.uk](http://www.lhc.ac.uk)



Going Underground - East of England teachers at the LHC



Look out for more information about the Year of Food and Farming in Education in our next newsletter. The year will begin in September 2007 and its aim is to stimulate involvement in food, farming and the countryside for all pupils throughout 2007/08 and beyond the year. To register your school and for more information visit [www.yearoffoodandfarming.org.uk](http://www.yearoffoodandfarming.org.uk)

**Master Class 13 - rescheduled**

Our Geographical Information Systems (GIS) Master Class, open to both science and geography teachers, has been re-scheduled for Tuesday 3<sup>rd</sup> July. Further details on the TSN website [www.tsn.org.uk](http://www.tsn.org.uk) under News & Events.

In addition to some top speakers, there is an exciting programme of practical activities, one of the highlights of these days for those teachers who have attended previous Master Classes. This time round it includes a chance to work in a 3D virtual reality suite at UEA.

GIS has a diverse range of applications & we are hoping for a bumper turn-out.